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(54) An optical intensity modulation transmission system

(57) In a transmitter side in an optical transmission system, an input binary signal is converted to duobinary signal, and said duobinary signal is applied to an optical modulation means which provides optical intensity modulation signal, wherein optical intensity for a center value of said duobinary signal is the minimum, optical intensity for other two values of said duobinary signal is the maximum, and optical phase for those two values is opposite with each other. In a receiver side, simple direct detection is carried out for receiving optical signal through an optical transmission line to provide demodulated binary signal. Thus, original binary signal is recovered without duobinary decoder and receiver sensitivity degradation. In the optical transmission system, optical carrier frequency component in signal spectrum is suppressed, signal bandwidth of modulated light is reduced as half as that of a prior art, so an optical transmission system for long distance, high bit rate and large traffic capacity is obtained.

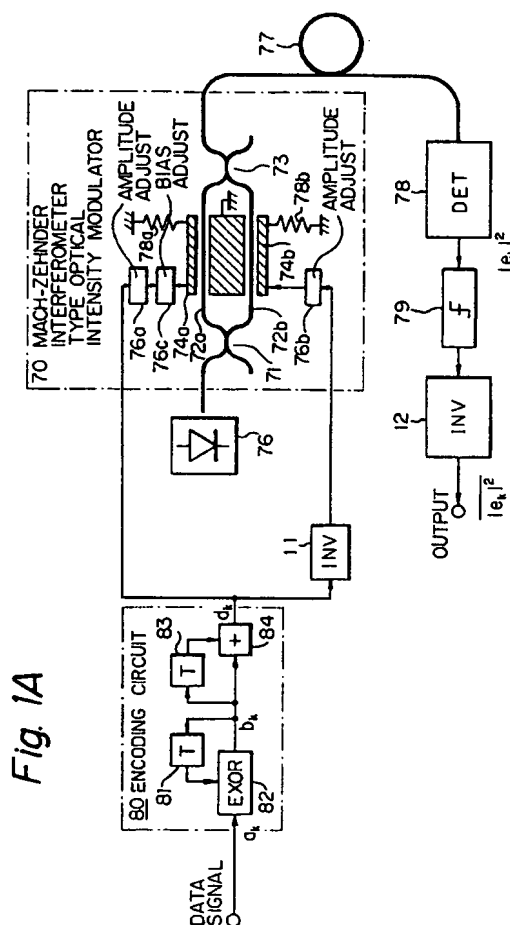


Fig. 1A

EP 0 701 338 A2